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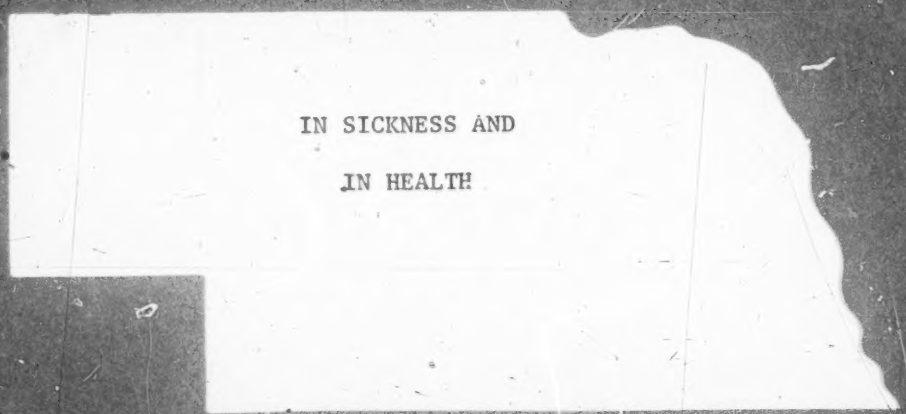

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NEBRASKA ANNUAL SOCIAL INDICATORS SURVEY

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NASIS-79 #11

IN SICKNESS AND IN HEALTH

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Price: $ .75

The Nebraska Annual Social Indicators Survey

Lynn K. White: 1979 Study Director

The findings in this report are based on data collected in the third Nebraska Annual Social Indicators Survey (NASIS). This survey is part of an on-going study of the quality of life in Nebraska conducted by the Bureau of Sociological Research at the University of Nebraska-Lincoln.

In 1979 a representative sample of 1882 Nebraskans eighteen years of age or older living in households was interviewed by telephone. The respondents to the 1979 survey are part of a panel originally selected and interviewed in 1977 and 1978. They will be re-interviewed every two years in order to provide information on changing quality of life. The interviews averaged approximately 40 minutes and included questions about environment, health, crime, political attitudes, occupation, education, family life and other matters reflecting the quality of life experienced in the state. For the entire sample, 95 out of 100 times the percentages computed from the items asked on the survey are likely to be accurate to within plus or minus 2.3 percent of the figure that would have been obtained if each adult in Nebraska had been surveyed. This is an estimate of maximum error and for most items the percentages are likely to be even more accurate.

The data gathered by NASIS are used by a wide variety of State and local government agencies for policy and program planning and by faculty and students at the University of Nebraska and other colleges for research. No information identifying any respondent is released to any users and the strict confidentiality of individual respondents is rigidly enforced. While the final responsibility for the organization and structure of the survey and for reports produced under its name rests with the Bureau of Sociological Research, public agencies and University departments play an integral part in planning the survey through an Advisory Committee. Public organizations interested in membership on the Advisory Committee should contact the NASIS Study Director.

Funding for NASIS comes from the University of Nebraska, The Bureau of Sociological Research, and State and local agencies which buy items and data analysis from the survey.

The NASIS surveys are repeated each year to measure changes in the quality of life in Nebraska. While there is a core of questions which is included every year, each survey has a large component of unique items which address specific topical issues. Plans for future years include interviewing a new sample of Nebraskans in 1980 as well as continuing to re-interview the 1977 panel every two years to assess changes in their lives. Additional detail on the NASIS surveys regarding use of the survey data or cost of purchasing items on future surveys can be obtained by contacting Lynn K. White, NASIS Study Director, at the Bureau of Sociological Research or by sending for a copy of the 1980 NASIS Prospectus.

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The rising cost of health care is a topic that concerns most people. There are claims and counterclaims about the causes of rising costs of medical services. The widespread use of medical insurance is thought to be one of the major causes of increasing medical costs. People with insurance coverage tend to demand more services because there is limited, if any, direct cost to them at the time they use the service. The growth of private insurance and the increase of public insurance for the aged and poor appears to have reduced the sensitivity of demand to price.[1] The higher demand for health care services then drives up the costs. This may encourage more extensive coverage among the insured.

Practitioners in turn, may order more services, both in numbers and in quality, if their clients are insulated from the direct costs of the services. The higher overall demand, coupled with an increase in demand for more expensive care, frequently prompts hospitals to raise their charge per patient day to finance the changed style of care. This increase in level of care can create more demand with another round of price increases.

Finally, the sheer availability of hospital beds is thought to be another contributor to rising costs.[2] When an existing over-supply of beds produces an incentive to unnecessarily use the faciiity, this is referred to as the "Roemer effect." For the physician, the increased supply of beds per capita reduces colleague pressures to share facilities.

Coupled with the reduced direct costs on the patient, bed availability can encourage physicians to extend their treatment of patients in hospitals. Thus, the admission rate and the average length of stay in hospitals may increase with availability of beds.

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[1]Martin Feldstein, "Quality Change and the Demand for Hospital Care," Econometrica, 1977; Jack A. Meyer, Health Care Cost Increases, Washington, D.C.: American Enterprise Institute, 1979.

[2]Institute of Medicine, Controlling the Supply of Hospital Beds, Washington, D.C.: National Academy of Sciences, 1976; Walter McClure, Reducing Excess Hospital Capacity, Excelsior, Minn.: InterStudy, 1976.

Survey Sample

A representative sample of 1940 Nebraskans were interviewed about their use of various medical services as part of the Nebraska Annual Social Indicators Survey conducted by the University of Nebraska-Lincoln Bureau of Sociological Research in 1978. Respondents were asked about the number of times they had seen a physician during the preceding year, whether they had been admitted to a hospital and the number of nights they had stayed in the hospital. By comparing these figures with the extent of insurance coverage we can gain some idea about the effect of medical insurance on the use of medical facilities.

The questions asked were: "Have you seen a doctor during the last twelve months, since March, 1977?", "How many times have you seen a physician in his office or clinic in the last twelve months?", "Were you admitted to a hospital during the past year?", "How many nights did you spend in the hospital?", and "In the last year, what portion of your own health expenses were paid by insurance?"

Because the general health of the individual and his/her age has some bearing on the use of health care facilities we took these factors into account. Sick people and the elderly are more likely to visit a physician or receive hospital treatment. Individual perceptions of either overall health and the extent to which their activities are limited by chronic conditions are among the more significant variables affecting physician visits and demands for medical service.[3] This even holds true for low-income persons covered or not covered by public assistance.[4]

The question,"Do you have any health problem or illness that you have had for more than three months, since March, 1977?", gave us some idea about the person's

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[3]Jan P. Acton, "Nonmonetary Factors in the Demand for Medical Services: Some Empirical Evidence," Journal of Political Economy, 1975; Ronald Andersen and Lee Benham, "Factors Affecting the Relationship Between Family Income and Medical Care Consumption," in Empirical Studies in Health Economics, H. C. Klarman (ed.), Baltimore: The Johns Hopkins Press, 1970; C. E. Phelps and J. P. Newhouse, "Effect of Coinsurance, A Multivariate Analysis," Social Security Bulletin, 1972.

[4]K. A. David and R. Reynolds, "The Impact of Medicare and Medicaid on Access to Medical Care," in The Role of Health Insurance in the Health Services Sector, R. N. Rosett (ed.), New York: National Bureau of Economic Research, 1976.

general health over the period in question. The responses to this item along with the person's age was statistically controlled using a procedure called multiple regression analysis. Thus, the data reported below already have been adjusted for the individual's general health and age.

Effects of Insurance

Most individuals interviewed are covered by some form of insurance.[5] However, the degree of insurance coverage differs widely. For example, 40 percent of the national population have adequate physician-visit coverage compared to 85 percent having adequate inpatient-hospital coverage.[6] Therefore, the extent of coverage rather than the presence of coverage is used in the comparisons. As expected, the degree of insurance coverage per individual does affect their use of medical services.

Although insurance coverage is not the only determinant in going to the doctor, the number of times people went to see a physician in the 12 months preceding the interview is related to their extent of coverage. People whose medical expenses the preceding year were at least half covered by insurance visit the doctor twice as often as individuals with no coverage. This is after we adjusted the figures for the person's health and age.

Whether or not the individual is admitted to a hospital is also related to insurance coverage as are multiple admissions. The data in Table 2 show that only four percent of those whose medical expenses were not covered by insurance were admitted, whereas more than 40 percent of those with extensive insurance coverage were admitted. Similar findings are revealed for those admitted more than once. None of these with one fourth or less of their expenses covered were admitted to two

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[5]According to the survey, ninety-three percent of Nebraskans have either private or public insurance coverage.

[6]Adequate coverage is defined as 80 percent of the expenses being paid by the insurer. Stephen Sudovar and Patrice Feinstein, National Health Insurance Issues, The Adequacy of Coverage, Washington, D.C.: Roche Laboratories, 1979.

or more times, while eight and nine percent were admitted twice among those whose coverage is extensive.

Perhaps most importantly, the number of nights spent in hospital is also affected by insurance coverage. The information in Table 3 generally shows that as the insurance coverage for last year's medical expenses increases the number of nights spent in the hospital also increases. The exception to this trend is for those without insurance coverage. However, the number of cases is so small (17), one cannot draw conclusions from the figures.

Additionally patients without coverage may be treated by the hospital house staff as part of their residency program. Such treatment usually has a longer length of stay. Where the number of cases is larger, the general trend of higher coverage being related to longer stays is clearly evident. An average stay of more than 10 days was reported by those whose medical expense coverage is 100 percent, whereas the average stay was approximately half that for those whose coverage was half or less.

Effects of Beds

The postulate that the increased number of beds per capita encourages usage, the Roemer effect, is countered by the proposal that the areas in the state with the largest per capita number of beds provide specialized care for a broad region. Therefore, the longer lengths of stays in the hospitals in these areas occur because of the influx of patients to the area with more acute illnesses. If this position is supported, we should not find longer lengths of stays for the residents in the area since the excess beds are used for patients who come from outside the area.

The number of beds per 1,000 population was calculated for each of the twenty-six economic planning regions in the State of Nebraska. We then compared individuals in areas with 3.6 or fewer beds per 1,000 with individuals in areas where the number per 1,000 was 3.7 to 5.4, 5.5 to 6.4, and 6.5 or more.[7]

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[7]The bed ratio is based on the number of acute beds reported in use by the hospitals in the state. Division of Hospital and Medical Facilities, Nebraska Department of Health, 1979.

The availability of hospital beds does not appear to influence admissions, but it has an influence on length of stay (see Table 4). Patients are admitted to hospitals at a uniform rate irrespective of the number of available beds per capita in the area. However, once admitted to a hospital, a person who lives in an area where hospital beds are plentiful does have a significantly longer stay.

According to Table 4, persons who lived in an area where hospital beds average 12 or more per 1,000 population are likely to spend an average of two and one-half days longer in the hospital than Nebraskans who reside in areas where hospital beds are less numerous. There is no difference in health status of the heavier and lesser bedded areas that would account for the longer lengths of stay. As shown earlier, the hospital admissions for the heavier bedded area is not higher than the lesser bedded regions.

Summary

In summary, the use of medical services is related in general to the extent of insurance coverage an individual has. The greater the coverage the more likely the individual is to see the doctor, be admitted to the hospital and stay for a substantially longer period. The availability of hospital beds, while not related to physician's decisions to admit patients, is related to the length of time that elapses before patients are discharged. Patients tend to have significantly longer hospital stays in areas where hospital beds are more abundant.

The cost of the extended use is passed directly or indirectly to consumers. According to existing research, this trend is likely to continue unless conscious efforts are taken to curtail costs.[8] The increase in the cost of hospital care that occurs in any year generally reflects the increases in insurance during a number of previous years. The demand is stimulated by an increase in insurance coverage with a lag as doctors and patients establish new treatment standards and habits. This is followed by a further hospital response with the addition of new personnel, equipment, services, and more patient costs.

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[8]Martin Feldstein and Amy Taylor, Council on Wage and Price Stability, The Rapid Rise of Hospital Costs, Washington, D.C.: U.S. Government Printing Office, 1977.

Table 1. Number of Visits to Physician According to Extent of Insurance Coverage.

Extent of Health Insurance Coverage During Preceding Year	Mean Number of Visits Adjusted for Health and Age of Respondent	Number of Cases
None paid by insurance	2.3	589
One-fourth paid by insurance	3.5	108
One-half paid by insurance	5.5	97
Three-fourths paid by insurance	4.8	333
All paid by insurance	5.1	163

Table 3. Length of Stay According to the Extent of Insurance Coverage.

Extent of Health Insurance Coverage During Preceding Year	Mean Number of Nights in Hospital Adjusted for Health and Age of Respondent	Number of Cases
None paid by insurance	12.3	17
One-fourth paid by insurance	4.7	11
One-half paid by insurance	6.1	23
Three-fourths paid by insurance	7.3	148
All paid by insurance	10.6	64

Table 2. Admission to Hospital According to the Extent of Insurance Coverage.

Extent of Health Insurance Coverage During Preceding Year	Percent Admitted to Hospital Adjusted for Health and Age of Respondent	Percent Admitted More than Once Adjusted for Health and Age of Respondent	Number of Cases
None paid by insurance	4%	0%	591
One-fourth paid by insurance	13	0	108
One-half paid by insurance	24	4	97
Three-fourths paid by insurance	44	8	338
All paid by insurnace	43	9	163

List of reports already released using data gathered in the 1979 Nebraska Annual Social Indicators Survey. These may be purchased at the indicated price from the Bureau of Sociologica: Research of the University of Nebraska-Lincoln.

Report Number	Title
1	Designs, Procedures, Instruments, and Forms for the 1979 NASIS. Lynn K. White. Price: $7.50.
2	Taxes: Are They Fair? Susan Welch and Alan Booth. Price: $ .50.
3	Nebraska's Children -- Learning to Work. Lynn K. White and David B. Brinkerhoff. Price: $ .75.
4	Nebraskans' Evaluations of Their State Government. Alan Booth and Susan Welch. Price: $ .50.
5	Nebraskans and State Water Policy: Part I. Susan Welch and Gordon Kissel. Price: $ .50.
6	Energy: Voluntary Household Conservation in Nebraska. Lynn K. White and Nikolai Rudakov. Price: $1.00.
7	Nebraskans and State Water Policy: Part II. Susan Welch and Gordon Kissel. Price: $ .50.
8	Nebraskans and Their Mental Health. Peter G. Beeson and Alan Booth. Price: $1.00.
9	Nebraska's Multiple Melting Pot. Hugh P. Whitt and J. Allen Williams, Jr. Price: $1.00.
10	Employed Wives and Marital Adjustment. J. Allen Williams, Jr. and Alan Booth. Price: $1.00.

Table 4. Admission to Hospital and Length of Hospital Stay According to the Availability of Hospital Beds.

Beds/1000 Population	Percent Admitted to Hospital Adjusted for Health and Age of Respondent	Percent Admitted More than Once Adjusted for Health and Age of Respondent	Number of Cases
3.6	18	4%	275
3.7 - 5.4	17	2	663
5.5 - 6.4	20	3	409
6.5+	17	3	524

Beds/1000 Population	Mean Number of Nights in Hospital Adjusted for Health and Age of Respondent	Number of Cases
0 - 3.6	7.9	40
3.7 - 5.4	7.9	111
5.5 - 6.4	8.7	82
6.5+	10.7	72